

THREE DIMENSIONAL PRINTING USING PHOTO- ACTIVATED BUILDING MATERIALS

ABSTRACT

The present invention provides a method, article of manufacture and system for fabricating an article using photo-activatable building material. The method includes the steps of applying a layer of the photo-activatable building material to a preselected surface, scanning the layer using a plurality of light-emitting centers to photo-activate the layer of photo-activatable building material in accordance with a predetermined photo-initiation process to obtain polymerization of the building material, wherein scanning is accomplished at a predetermined distance using a predetermined light intensity, and repeating the steps of applying the layer, with each layer being applied to an immediately previous layer, and scanning the layer with the plurality of light-emitting centers to polymerize the building material until the article is fabricated.